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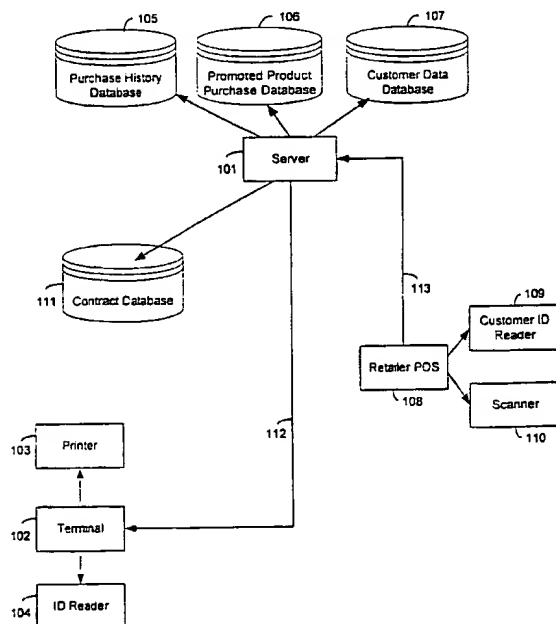
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(54) Title: **SYSTEM AND METHOD FOR FORMING AND PERFORMING MULTIPLE PURCHASE INSTALLMENT CONTRACTS**



(57) Abstract: An automated method and system to form and monitor the performance of a multiple purchase installment contract for retail items. A customer's requirements for a product over a specified time span are first determined by either analyzing that customer's prior purchases or by questioning the customer about his or her usage. A schedule of periodic purchases is then determined to allow the customer to satisfy his or her needs for the product by making installment purchases for that product during the contract's time span. The installment purchases are monitored and recorded and the compliance by the customer with the terms of the contract are determined. The customer may incur an additional cost or receive a benefit for breach or satisfaction of the contract.

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## **System and Method for Forming and Performing Multiple Purchase Installment Contracts**

### **Background of the Invention**

#### **Field of the invention**

The present invention relates generally to automated methods and systems for forming and monitoring performance of multiple purchase installment contracts, and more specifically to automated methods and systems which use electronic communications and automated data processing equipment to perform tasks related to contract formation and performance monitoring.

#### **Discussion of the background**

Product promoters have employed many techniques to increase brand loyalty and provide incentives to consumers to purchase higher quantities of a particular manufacturer's product. A common technique to encourage a customer to purchase more of a manufacturer's product is to offer larger quantity packages of a product at a lower price per unit of quantity. Manufacturers may also assemble multiple packages of products into a single package for sale, such as a "6 pack" of bottled beverages or other items.

A further step in encouraging consumers to purchase larger amounts of a manufacturer's product are so-called "warehouse clubs." A warehouse club typically offers only products that are in packages containing a very large quantity. The warehouse club typically offer these items at a lower cost per unit quantity than is available from other retailers in order to encourage customers to purchase these larger packages. The item offered for sale by the warehouse club may be in a single large package, or the warehouse club may offer one "item" which comprises smaller containers assembled into the one "item" which the customer must then purchase as a whole. An example of the latter item includes a package of ten conventional size tubes of toothpaste that the customer must purchase in order to receive the beneficial price offered by the warehouse club. Requiring the customer to purchase large quantity packages of a product has the disadvantage of requiring the customer to spend large sum of money at one time in order to purchase the large quantity, although the product is purchased at a discounted per-unit cost.

Requiring the customer to purchase large quantity packages of a product also inconveniences the customer by requiring the customer to store the large package and this technique is limited in its application to perishable items since the large quantity is usually not consumed within a short time by most households.

### Summary of the Invention

It is an object of the present invention to allow product promoters to offer to customers multiple purchase installment contracts for products produced or promoted by a specific entity, wherein the terms of that contract are customized to the customer's needs.

It is another object of the present invention to allow a product promoter to make one or more contractual offers to a customer and allow that customer to accept a contractual offer through an automated system using electronic communications.

It is a further object of the present invention to provide a method and system to allow a product promoter to determine the requirements of a specific customer for a product over a time span which is anticipated to encompass multiple purchases of that product by that customer.

It is yet another object of the present invention to allow a product promoter to automatically monitor the multiple purchase installments made by a customer under a multiple purchase installment contract and to automatically determine compliance with, or breach of, the contract by that customer.

The present invention achieves these and further objectives by providing an automated method, system and computer program product which perform the operations required to determine contractual terms, offer a contract, accept a customer's acceptance to that contract, monitor purchases made under the contract, determine if the customer satisfied his or her requirements under the contract and which may apply either a benefit or additional cost upon satisfaction or breach of the contract.

### Brief Description of the Drawings

Fig. 1 is a schematic diagram of the components comprising a system implementing the present invention;

Fig. 2 is a processing flow chart of the steps performed by a system implementing the present invention;

Fig. 3 is a processing flow chart of steps performed when a customer enters data used to estimate that customer's quantity requirement for a product;

Fig. 4 is a processing flow chart illustrating the processing performed in association with a customer's accepting a contract offer;

Fig. 5 is a processing flow chart illustrating the processing performed in association with a customer's executing a purchase transaction; and

Fig. 6 is an illustration of a printed identification to be used in conjunction with installment purchases.

### Description of the Preferred Embodiments

The present invention provides an automated technique that allows customers to enter into contracts which require the customer to purchase multiple installments of a product. The product is specified as to manufacturer brand as well as product type. The present invention further automatically monitors the purchases made by a customer who has entered into a multiple purchase installment contract to determine if and when the customer has satisfied the contract terms. The preferred embodiment utilizes three conceptual components; 1) a server which performs the data processing required by the present invention; 2) an electronic communications terminal which allows the customer to interact with the system; and 3) a retailer where the customer purchases products. It is obvious that various embodiments of the present invention may combine these components into a single device or may differently divide the processing among different devices of a system implementing the present invention. A retailer within the scope of the present invention includes but is not limited to both physical retail store locations and Internet retailers who conduct retail sales over the World Wide Web.

The present invention may be operated through a joint effort between a product sponsor and a retailer in order to promote the sale of a particular product. A product sponsor is an entity with an interest in promoting the sale of the product, such as a manufacturer or distributor. Products which are the subject of multiple purchase installment contracts are referred to herein as

"promoted products" because there is a promoter of that product who is trying to increase or promote the sale of more of that product. The present invention may be used to promote products of a particular brand or products produced by a particular manufacturer. The contract formed by the system implementing the present invention may require the customer to purchase the promoted product from a specified retailer, although the present invention works equally well, and is more attractive to the customer, when the customer is given the flexibility choosing retailers.

The description of the preferred embodiments will be made in conjunction with reference to the figures, wherein like numbered elements serve the same or similar functions. Figure 1 illustrates the components of a system implementing the present invention. Server 101 is a computer programmed to implement the processing required by the present invention. Server 101 in the preferred embodiment maintains databases containing data required to implement the methods of the present invention. Server 101 is normally operated by an entity that is independent of the retailer, such as a manufacturer, a distributor of products or an independent operation which provides the service of operating the system implementing the present invention. Server 101, as well as other components of the system implementing the present invention, may be operated by an independent organization that has contractual relationships with a plurality of retailers as well as with multiple sponsors. An independent organization operating a system implementing the present invention gives the customer a choice of retailers from which to purchase products as well as providing the customer with a broader choice of products from more than one sponsor.

A customer using the preferred embodiment communicates to the server 101 through an electronic communications interface, which in the preferred embodiment comprises an electronic communications link 112, a terminal 102 and optional devices connected to the terminal 102 such as the printer 103 and ID reader 104. The electronic communications terminal 102 bi-directionally communicates to server 101 by an electronic communications link 112 and comprises a display screen to display information to the customer as well as a user input facility; such as a keyboard, touch screen interface or mouse driven selector, to allow the customer to input information either by entering the information or by selecting options on the display screen.

The electronic communications terminal 102 may have an optional printer 103 which is used to print documents for the customer using the terminal 102. The documents produced by printer 102 may contain information of interest to the customer, or a document that may be used as a customer's identification in conjunction with the subsequent purchases of the product that is the subject of the contract. Terminal 102 may also have an optional customer ID reader 104 which will allow the terminal to determine the identification of the customer. ID reader 104 is typically similar to customer ID reader 109 and is usually used to read the identification used by the customer at the retailer when making purchases under the contract formed by the system implementing the present invention.

The terminal 102 may be a personal computer connected to the Internet, which serves as the electronic communications link, and being used as a World Wide Web browser, terminal 102 may be a personal computer used to read e-mail sent to the customer's e-mail address by the server 101 through an electronic communications link, or the terminal 102 may be in automated Kiosk that is located in a public location and which is available for public use. The terminal 102 and server 101 communicate bi-directionally over the electronic communications link 112 through one or more communications methods, as are known to practitioners in the relevant arts. The customer may communicate information to and receive information from the server 101 through either the same electronic communications interface, e.g. over a world wide web interface, or through different interfaces, e.g. receive information from a world wide web interface and send information to the server 101 via e-mail. Automated Kiosks may also be located at convenient locations within a retailer or at other locations convenient for the public. Automated Kiosks may also be designed to minimize the customer's interaction by incorporating the optional ID reader 104 to more quickly identify the customer using the terminal 102.

A system implementing the present invention may interact with a plurality of retailers. This plurality of retailers, for the purposes of this description, may consist of individual retail stores which are operated a part of the same retail chain or the plurality of retailers may consist of retail stores that are not related except for their interaction with the system implementing the present invention. Each retailer comprises a retailer POS (Point Of Sale) system 108 which is used by the retailer to process customers purchases during a purchase transaction, which includes

checkout of the customer's order and the customer's payment for customer's purchases. The retailer POS 108 essentially comprises the equipment used at the customer checkout station of the retailer and a retailer with a plurality of checkout stations will have corresponding retailer POS equipment that is located at each of the multiple checkout stations. An Internet based retailer, i.e. a retailer allowing customer interaction over the Internet or other electronic communications network and shipping purchased products to customers in response to customer orders received either over the internet or other communications means, may use a system which performs functions similar to those performed by the retailer POS 108 that are identified in this specification.

The retailer POS 108 of the preferred embodiment is connected to a customer ID reader 109 which is used to automatically read a customer's identification and provide and electronically readable data stream identifying the customer. The preferred embodiment identifies customers through the use of a customer identification number that is encoded into a printed barcode. The customer carries either a card or other document that has the printed barcode and presents this card or document to the retailer POS operator or the customer ID reader 104 itself. The operator may then present the customer identification with the barcode to the customer ID reader 104 and the barcode will be read.

The customer identification used by the present invention may be an identification associated with a retailer's frequent shopper program. Retailer frequent shopper programs provide incentives to customers who present identification during each purchase. Frequent shopper programs may record the list of items each customer purchases and the recorded list may further be associated with the customer's identification. An accumulation of recorded purchase selections for a specific customer may be analyzed by the retailer in order to determine purchasing patterns for that customer. A system implementing the present invention that is operated by an independent organization may also utilize a retailer specific frequent shopper card to identify the customer making a purchase. Such a system will record the frequent shopper card number and a retailer's identification in the customer data database 107. The retailer POS 108 will send the customer identification, along with an identification of the retailer itself, to server 101 and server 101 will compare received identification of the customer and retailer to data

stored in the customer data database 107 to uniquely identify the customer.

An Internet retailer may identify customers through a variety of methods. Internet retailers may also allow the customer to provide a frequent shopper membership number over the user interface through terminal 102, or the Internet retailer may use other identifying information that is more readily given by customers given the nature of Internet retail shopping. Examples of identifying information that an Internet retailer may use to identify customers includes but is not limited to using, either singularly or in combination, the following information: a) their name and mailing address; b) their payment account number; or c) a "cookie" sent to a world wide web browser used by the customer.

The retailer POS in the preferred embodiment is also connected to a scanner 110. Scanner 110 is used to automatically read bar codes printed upon or attached to items that the retailer sells. This allows the retailer to have checkout locations which can rapidly determine the items a customer is purchasing in order to determine the total payment required by the customer. The data generated by the scanner may be used to form a machine readable list of items purchased in that transaction. This machine readable list may then be recorded, in association with a customer identification read by the customer ID reader 109, into a purchase history database 105 and later analyzed to determine customer's purchasing patterns. The multiple purchase transaction data which has been accumulated in the purchase history database 105 may be analyzed to determine the consumption rate of various products by each customer.

The preferred embodiment of the present invention utilizes retailer POS 108 designed to produce an electronically readable form of the customer's identification, through the use of customer ID reader 109, as well as an electronically readable list of that customer's purchases, as produced with the aid of scanner 110. The retailer POS 108 will determine this data, format the data and communicate the customer identification and purchase description to the server 101. Retailer POS 108 communicates to server 101 through retailer communications link 113. Retailer communications link 113 may be any communications link between the retailer and server 101, such as dial-up telephone lines or packet switched networks, as are known to practitioners in the relevant arts.

Server 101 performs the processing, further described below, to accumulate purchase data



to support determination of the customer's purchasing patterns, as well as determine if purchases made by the customer contain a qualifying installment purchase under a contract formed and monitored by the system implementing the present invention. Data received from the retailer POS 108 is stored into databases maintained by server 101, as further described below.

The processing steps which form and monitor the performance of a contract using the method of the present invention are described in Fig. 2. The method begins in step 201 by estimating the customer's requirement for a specific product for a specified time span. The time span for which a customer's requirements for a specific product will be estimated is set by the configuration of the system implementing the present invention, but the system may allow the customer to select from a set of time spans or any time span within a range. The time span for which the customer's requirements will be estimated, which is also the time span of the contract to be formed by the present invention, is based upon a time span set by the sponsor of the contract and is to be long enough so as to have the customer buy an appreciable amount of product over that time span but not too long so as to be unattractive to the customer or place too high of a risk of cost increases on the sponsor. A sponsor may wish to offer a lower price for contracts with longer time spans since more of the promoted product will be purchased over the time span of the contract.

The preferred embodiment estimates a customer's quantity requirement for a specified product in one of two methods. Other methods to estimate the customer's requirements may be used and still be within the scope of this invention. One method used to estimate a customer requirement analyzes prior purchases made by that customer over multiple purchase transactions during a certain time span in order to estimate the customer's future requirements over the same or a different time span. The preferred embodiment reads a customer's identification during all purchase transactions, both before and after contract formation, and then stores a description of those purchases in association with the customer's identification into the purchase history database 105. The purchase history database 105 then stores a description of customer product purchases made during multiple purchase transaction and this accumulated purchase history data may then be analyzed to identify a customer purchase pattern. The customer purchase pattern may then be the basis of an estimate of the customer's usage rate for a particular product and the

customer's requirements may be estimated based upon those estimated usage rates.

Estimation of a customer's usage rate of a promoted product by analysis of prior purchases may be performed by analysis of selected products, referred to herein as "base products," whose consumption is related to the promoted product. Each promoted product has an associated set of "base products" whose prior purchases may be used by server 101 to estimate the customer's consumption rate of a promoted product. Once a customer identifies the promoted product for which he or she may wish to enter into an installment purchase contract, server 101 retrieves the prior purchases stored in the purchase history database 105 that are stored in association with that customer's identification, identifies prior purchases by that customer of base products associated with that promoted product, and performs the processing required to estimate that customer's requirement for the promoted product.

An example of estimating a customer's consumption rate of a promoted product by observing the customer's purchase history of a base product is observing how much of a product in the same product category the customer consumes. In an example product category of laundry detergent, the customer purchases of laundry detergent in a six month time span may be observed in order to estimate that customer's "per month" average consumption and multiplying that by the number of months in the future time span. Product in the same product category as the promoted product are products that are equivalent to the promoted product, although the product may be any brand and may also be a similar item such as a liquid and powered detergent. Another example bases the promoted product's requirement estimation upon purchases of a product in a related category. An example of estimating requirements based on purchases in a related category include estimating a family's requirement for baby food by observing the quantity of diapers purchased to determine the number and approximate ages of babies in a family.

An alternative method for estimating a customer's requirement over a specified time is through data entered by the customer. That alternative method is illustrated in Fig. 3 and is described below in the discussion of that figure.

The present invention may also operate by allowing the customer to specify the promoted product or products that he or she wishes to purchase in a multiple purchase installment contract. These embodiments will allow the customer to provide a product category, total quantity (which

may be presented as a periodic quantity to be purchased over a specified number of periods) and possibly other contractual terms. In response to the promoted product specification or other contractual terms provided by the customer, the server 101 will respond with contract offers to sell the customer the specified products at a price determined by the programming of server 101. The programming to select sponsor contractual terms in response to customer provided specifications may be easily designed and developed by those skilled in the relevant arts.

Once an estimate of the customer's requirement for a particular product is produced, the contractual terms of one or more installment purchase contracts are determined in step 202. The contractual terms which are to be part of a multiple purchase installment contract formed by the present invention are specified by the sponsor of the contract, but the contractual terms offered by the sponsor through server 101 may be specified to vary based upon factors specified by that sponsor. A sponsor may specify different contractual terms which depend upon the time span of the contract or the total quantity of the product the customer will purchase under the contract. A sponsor may also specify different contractual terms based upon observed purchasing patterns of the customer as are derived from analysis of the data contained in the purchase history database 105. The system of the present invention may include an analysis of the customer's purchase preferences in step 202 in order to determine customer's purchasing patterns upon which contractual terms may depend. An example of a purchasing pattern which could be the basis of changing contractual terms include a customer's purchasing pattern that reveals a brand purchasing behavior, i.e. that he or she exclusively purchased the sponsor's brand of a particular product category in the past. If such a customer has demonstrated this brand loyalty in the past, the sponsor may not wish to offer the customer very favorable contractual terms since the customer will probably continue to purchase that brand in the future. If the customer's brand purchasing behavior demonstrates he or she has purchased a variety of brands or exclusively purchased another brand in the past, the sponsor may want to offer more favorable contractual terms to entice the customer to purchase the sponsor's brand exclusively for the duration of the contract. Contractual terms specified by the sponsor may also vary based upon the time span of the contract if the customer is given a choice of time spans in step 201. Other parameters which may vary the contractual terms of a contract the sponsor wishes to offer the customer may be

readily defined by the sponsor and determined in step 202 in order to determine the terms of a contract to offer to the customer. A contract offer may include a contractual term requiring the customer to make all purchases under the contract from a specified retailer.

The contractual terms determined in step 202 may include a variety of requirements and limitations on the purchases the customer must make to satisfy the contract. Contractual terms may define various time spans of the contract, quantities of the promoted product which must be purchased or the number of installments which must be purchased. Contracts may also require a specified number of installments or allow a fixed total purchase quantity to be purchased over the time span of the contract in any number or size of installments. A contract will specify a total set of products which the customer must purchase during the time span of the contract. The total set of products may be a fixed amount or the contract may also require only that the customer purchase a quantity of the promoted product that is within a specified range, thereby guarantying the sponsor a minimum sales amount and allowing the customer to purchase more than the minimum amount, but less than a specified maximum, at the contract price. Several contracts may also be offered to the customer with instructions that only one contract may be accepted, and the customer may then select a contract to accept.

Once contract terms are determined, the present invention then communicates the one or more contract offers to the customer in step 203. The server 101 of the preferred embodiment assembles the contract terms and defines information to be displayed to the customer. The server 101 then sends information to the terminal 102 to be displayed to the customer. Terminal 102, as described above, may be a World Wide Web browser or automated Kiosk used to display information to the customer whereby the customer interacts in real time and may select further information to be displayed or decide to modify selections available to him or her. The terminal 102 may also display electronic mail messages which were generated by server 101 and which contain the contract offer and describe methods for the customer to receive more information or accept the offer.

The process then proceeds to step 204 where the customer may or may not accept one of the offers communicated to him or her in step 203. If multiple contracts are offered to the customer in step 203, the customer may select one of those contract offers to accept. If only one

contract was offered, then the customer may select to accept that contract offer. If the customer declines to accept a contract offer, then the processing has finished and the customer will have not entered into a contract. If the customer does select to accept a contract offer, an installment purchase contract is formed which will require the customer to purchase a specified quantity of the specified product under the contractual terms of the contract. Server 101 will store a definition of the contract into the contract database 111 to allow the customer's future purchases to be automatically compared to the contract requirements in order to automatically monitor and determine contract compliance and satisfaction by the customer. The processing of step 204 may further require the customer to provide personal information to facilitate the retailer's communications with the customer or to allow further directed promotions to be provided to the customer. The customer may be required or requested to provide his or her address, demographic data such as age, family size or number and type of household pets. An account number to which an additional cost be charged may also be provided at the time of acceptance. The server 101 may store this information in association with the customer's identification if that information had been previously collected during, for example, the formation of a previous contract or in conjunction with the customer's signing up for a frequent shopper card.

A contract formed by the present invention may charge an additional cost to the customer if the customer does not fully perform under the contract. Such a contract will usually have the customer make installment purchases at a discounted price in return for the commitment to purchase a specified total quantity. If the customer does not purchase that quantity, this additional cost will compensate the sponsor for the discount. If an additional cost is to be applied in the case of a customer not satisfying the contract terms, the customer may be required to provide an account number against which the additional cost may be charged. This account number may be required as part of the acceptance process of step 204. The data displayed on the terminal 101 which allows the customer to accept the contract offer may allow the customer to enter this account number for storage into the customer database 107.

The time span of the contract begins either immediately after formation of the contract in decision step 204, or the contract may begin at a specified time following contract formation. Once the contract has been formed and its time span has begun, the customer may then purchase

installments under the contract. Purchases under the contract are performed in step 205. During a purchase, a customer will present his or her identification, which may be a device identifying the customer's payment account, a frequent shopper card, an identification printed for the customer by printer 103 either upon formation of the contract or during subsequent uses of the terminal 102 by the customer during the time span of the contract, or any identification used by the retailer and readable by customer ID reader 109. These purchases will occur in the preferred embodiment at a retailer and be determined and reduced to an electronically readable description by the retailer POS 108, which also uses customer ID reader 109 and/or scanner 110 to identify the customer as well as the products purchased by that customer. For every purchase transaction where a customer presents a machine readable identification, the retailer POS 108 of the preferred embodiment transmits the customer's identification along with an electronically readable purchase description, which is a description of the items purchased, to the server 101 after the customer's purchase is complete. Upon receipt of a description of the purchase and customer identification, the server 101 examines the contract database 111 to determine if any installment contracts are stored in association with that customer's identification. Server 101 will retrieve descriptions of any installment purchase contracts with periods of performance covering the time of the customer's purchase. The server 101 will then compare the customer's purchases to the retrieved contract requirements for that customer to determine if any of the purchases qualify as installment purchases under one of the retrieved contracts. Server 101 will compare data describing the purchase to the terms of the contract to determine if this purchase constitutes an installment. If the purchase does constitute an installment, the purchase will be stored in the promoted product purchase database 106. If the terms of the contract require that a discount be provided for the purchase of a qualifying item, e.g. the contract provides that each purchase of the promoted product will have a one dollar discount applied to each purchase, server 101 will communicate that discount to the retailer POS 108 and the retailer POS 108 will apply that discount. Server 101 of the preferred embodiment also stores each of the entire descriptions received from the retailer POS 108 into the purchase history database 105 in order to support analysis of prior purchases to determine purchasing patterns exhibited that customer.

If the customer is to receive a discount for the purchase under the multiple installment

contract, the discount may be provided in a number of ways. An immediate discount to the purchase price of the product may be provided, as described above. Alternatives to an immediate discount include providing to the customer a discount certificate, such as a coupon, which may be used during a future visit. The discount certificate may entitle the customer to a discount on the purchase of any product, or the certificate may only entitle the customer to a discount if the customer purchases a specified product. Retailer POS 108 may be configured to print such a certificate in response to the purchase under the contract.

Server 101 may periodically examine the contract database 111 and the promoted product purchase database 106 to determine if multiple purchase installment contracts have been satisfied by the customer or if the time span of any contracts have expired. Step 206 signifies this periodic examination, which may also be performed after each purchase to determine if the total contract purchase quantity requirement has been satisfied. Periodic examination of the currently pending contracts and customer purchases may occur independently of customer purchases to determine if the time span of the contract has expired. Alternative embodiments may only perform periodic examination and not perform the processing illustrated for the preferred embodiment in fig. 2 that examines contractual compliance following each customer purchase. If the customer has not purchased products which satisfy the entire contract requirement or the time span of the contract has not expired, server 101 will not perform further processing for this customer, other than to periodically determine if the time span of the contract has expired, until the customer purchases more products.

If the processing of step 206 determines that the customer has purchased the entire quantity required by the contract or the time span of the contract has expired, i.e. the contract may be complete, processing will advance to step 207. In step 207, the server 101 will determine if the customer has satisfied all of the terms of the contract. If the contract has been satisfied, the processing will advance to step 208, where server 101 will examine the terms of the contract to determine if satisfaction of the contract requires that a benefit be provided to the customer. An enticement for the customer to enter into a contract may be providing a benefit, such as a rebate or other item of value, to the customer in addition to or instead of a discounted price for each purchase. If such a benefit is to be provided, processing advances to step 211, where the benefit

is provided. Examples of benefits provided in step 211 include a check to be mailed to the customer's address that is stored in the customer database 107, a credit may be provided to a credit card or bank account that is identified in the customer database 107, or a certificate for an item of value may be mailed to the customer's address.

If step 207 determines that a contractual term is not satisfied, processing will advance to step 209. At this point, the contract has not been satisfied. The terms of the contract may require that an additional cost be charged to the customer for not fully performing under the contract. Step 209 will examine the terms of the contract retrieved from the contract database 111 to determine if such an additional cost is to be charged. If no additional cost is to be applied, the processing for this contract is complete. If an additional cost is to be applied, the processing will advance to step 210 in order to apply the additional cost. The additional cost may be a payment which must be made by the customer, or the additional cost may take the form of any cost applied to the customer, including offering less beneficial contracts to that customer in the future. After the additional cost is charged, processing is completed for this contract.

Fig. 3 further illustrates the optional processing which may be performed in step 201 that allows the customer to enter data which is used by an automated calculation process to estimate the customer's quantity requirement for a product over a specified time span. The customer enters data through an electronic communications interface which may be a world wide web display, e-mail using terminal 102 and electronics communications link 112, or a similar communications apparatus may be used. The electronic communications interface may be the same interface used for other communications between terminal 102 and server 101, or a separate interface, such as an e-mail communication, may be used. The processing in fig. 3 begins with step 301 wherein the customer selects a retailer from which he or she wishes to purchase the product. The selection of a retailer may be required due to the fact that different retailers may cooperate with different promoters and therefore different brands may be available at the different retailers for multiple purchase installment contracts. Contracts offered by the present invention may not be limited to a specific retailer, and in such cases the customer is not required to identify a retailer. The customer may make an explicit selection of a retailer from a list presented to him or her, or the retailer may be implicitly selected by use of a terminal 102 that is



an in-store automated Kiosk located within the particular retailer. A retailer may also be implicitly selected by using terminal 102 to display world wide web pages that offer the contract but are associated with a particular retailer.

The customer next proceeds to step 302 where he or she may select the product for which he or she is interested. The terminal 102 may display a list of products from which the customer may choose. The products listed are usually determined by the products which have sponsors promoting them, and therefore are available to purchase under a multiple purchase installment contract with advantageous contractual terms for the customer. The customer may select a product by category, e.g. laundry detergent, as well as a particular brand of a product.

Once a product is chosen, the processing proceeds to step 303 wherein the customer is prompted to respond to questions with data that will allow the server 101 to estimate the amount of the product selected in step 302 that the customer will use over a given time span. This step may also include prompting the customer for information concerning how long of a time span they may wish to commit to purchasing the selected product. The time span may be chosen by direct inquiry and selection by the customer, or indirect questions, e.g. asking the customer about the age of their children and thereby determining the type and duration of need that the customer will have for diapers, may be used. The usage rate may be determined by inquiry into the customer's habits, such as estimating laundry detergent usage by asking about the number of laundry loads washed in that household per week. Once the customer enters the requested information, server 101 will calculate an estimated usage rate for the customer of the subject product.

Fig. 4 illustrates in more detail the processing that is performed in step 204 wherein the customer accepts a contract offer. The customer decides whether to accept the offer in step 401. If the customer does not accept an offer, the processing is complete. If the customer does select a contract offer, the processing advances to step 402 wherein the customer performs an affirmative step to accept the offer, and thereby manifest his assent to forming the contract. The affirmative step to be taken by the customer in step 402 may include, for example, using the facilities of terminal 102 to manipulate a display of a world wide web page on terminal 101 such that the customer performs a specified series of steps (e.g. "clicking" on a world wide web page "button")

or by sending a return e-mail to server 101. The customer's acceptance of the contract is then communicated to server 101.

Once the customer has provided his assent to the contract, processing then progresses to step 403 to decide whether a form of payment security is required to be provided by the customer. Some contracts may charge an additional cost to the customer if he or she does not purchase the entire quantity required by the contract or does not fulfill other contract terms. If an additional cost is to be charged, the system may require a form of payment security for that additional cost to be provided at the time of contract formation. Candidate contracts stored within server 101 will define whether security must be provided and what types of security may be provided. If security is required, the customer is advanced to step 404 wherein he or she will provide security for the contract. The security accepted may include, for example, a credit card number or checking account number from which the additional cost may be deducted.

The processing then determines whether an identification is to be provided to the customer. A printer 103 attached to terminal 102 may be used to print a sheet which the customer may use for identification. An example identification sheet is shown in fig. 6 and described below. In addition to a sheet printed at a conventional printed, such as on a home computer utilized as terminal 102, an in-store automated Kiosk utilized as terminal 102 may also dispense printed or generic identification cards to the customer. These cards may have an identification number encoded upon a printed bar code or magnetic stripe and be read by the customer ID reader 109. A printed identification sheet or other provided identification is particularly useful if the customer does not have an identification device that is recognized by the customer ID reader 109, e.g.: a frequent shopper card. If an identification is to be provided, the processing proceeds to step 406 where the sheet or other identification device is produced.

Fig. 5 illustrates the processing performed when a customer executes a purchase transaction at a retailer POS 108. Fig. 5 describes in more detail the processing performed in step 205 illustrated in Fig. 2. The customer's identification is first read in step 501 by the customer ID reader 109. This may involve reading a bar code encoded upon a printed sheet or an identification card with an identification number encoded either in a printed bar code or a magnetic stripe. It is obvious that the present invention will work with any identification device

or technique compatible with customer ID reader 109.

A description of the customer's purchase selections are then accumulated in step 502. If the retailer is selling products with printed bar codes attached to them the retailer may already be using an optical scanner 110 to read those bar codes in order to accumulate a list of items the customer is purchasing. This commonly used architecture is utilized by the present invention to produce an electronically readable list of items being purchased by the customer. If the retailer is not selling items with barcodes, the retailer may use other methods, such as manually keying inventory numbers into a computer, to obtain an electronically readable list of purchases to send to server 101. This electronically readable list and the customer's identification are then communicated to server 101.

In step 503, the electronically readable list of purchased items and the customer's identification are communicated to server 101. Server 101 of the preferred embodiment then stores the entire list in association with the customer's identification into the purchase history database.

The processing then advances to step 504 to analyze the electronically readable list of purchases produced in step 502 in order to determine if the customer has purchased an item that is the subject of a multiple purchase installment contract formed by the system implementing the present invention. Server 101 retrieves the contracts associated with the customer's identification and compares purchases currently made by the customer to the retrieved contract requirements to determine if any purchases were the subject of installment contracts into which that customer has entered. If the customer purchases a promoted product, the processing advances to step 504 wherein the purchase is stored into the promoted product purchase database. The server 101 will store, in association with the customer's identification, a description of the promoted product that was purchased and the time and date of the purchase. The time and date of the purchase is stored to allow determination of the satisfaction of contractual terms limiting the time of installment purchase transactions. The processing will then advance to step 505 to determine if a discount is to be applied to that purchase. The terms of the contract, retrieved from the contract database 111, will set forth any discounts to provide to individual purchases of the promoted product. If there is to be a discount applied to this purchase, the processing advances to step 506 to apply

that discount. The retailer POS 108 may automatically deduct the discount from the purchase and indicate that discount on the receipt given to the customer.

Fig. 6 illustrates a customer identification document which may be printed for the customer on a conventional printer, such as printer 103. An identification as shown in Fig. 6 may be provided to a customer, for example, who has entered into a multiple purchase installment contract through a terminal 102 that is an internet terminal or an in-store automated Kiosk. The use of a printed identification as is shown in Fig. 6 allows any customer to enter into a contract without having an identification card that is distributed by the retailer or other entity. The customer identification is provided through an identification number that is encoded into a bar code that shown in the lower right corner of fig. 6. The printed identification document may also have printed information that describes the contract into which the customer has entered as well as instructions as to how to make qualifying purchases. The customer may have identification documents printed at different times during the time span of the contract. If identification documents are printed during the contract time span, progress of the customer's purchases may also be printed on the identification, as is shown in Fig. 6 by the line "As of March 6, 2000, You have Purchased 14 boxes." Server 101 may also be configured to communicate to the customer the purchases the customer is making during the contract and how many future purchases are yet to be made. This information may be communicated through electronic communications such as e-mail or the use of a World Wide Web page accessible by the customer which summarizes purchase installment contracts the customer has entered into and the purchase made towards satisfaction of those contracts.

The system and processes described herein may be implemented using a conventional general purpose microprocessor (e.g., server 101) programmed according to the teachings in the present specification (e.g., Figs. 2-5), as will be appreciated to those skilled in the relevant art(s). Appropriate software coding can readily be prepared by skilled programmers based on the teachings of the present disclosure, as will also be apparent to those skilled in the relevant art(s). However, as will be readily apparent to those skilled in the art, this invention may also be implemented by the preparation of application-specific integrated circuits or by interconnecting an appropriate network of conventional component circuits.

The present invention also includes a computer-based product which may be hosted on a storage medium and include instructions which can be used to program a microprocessor to perform processes in accordance with the present invention. This storage medium can include, but is not limited to, any type of disk including floppy disks, optical disks, CD-ROMs, magneto-optical disks, ROMs, RAMs, EPROMs, EEPROMs, flash memory, magnetic or optical cards, or any type of media suitable for storing electronic instructions.

It is obvious that numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described herein.

**Claims:**

1. A computer implemented method for forming and monitoring performance of a multiple purchase installment contract over an electronic communications interface, comprising the steps of:
  - accepting, through said electronic communications interface, a customer's assent to a contract to purchase a total set of products in multiple installments, wherein said total set of products comprises products from a specific sponsor;
  - recording a plurality of purchase descriptions in association with an identification of said customer, wherein each purchase description contained within said plurality of purchase descriptions describes a present purchase by said customer of an item contained within said total set of products;
  - and
  - analyzing said plurality of purchase descriptions to determine if said multiple purchase installment contract has been satisfied.
2. A method as set forth in claim 1, wherein said electronic communications interface is one of an Internet world wide web interface, an electronic mail interface, and a kiosk.
3. A method as set forth in claim 1, wherein said total set of products is specified by said customer.
4. A method as set forth in claim 1, wherein said total set of products is specified by said sponsor.
5. A method as set forth in claim 1, wherein said step of recording occurs through equipment located at a retailer's point of sale location.
6. A method as set forth in claim 1, wherein said step of recording occurs through equipment operated by an Internet retailer.
7. A method as set forth in claim 1, wherein said customer identification is determined by reading one of
  - a frequent shopper card,
  - a checking account number, and

a printed identification produced by a message transmitted over said electronic communications network.

8. A method as set forth in claim 1, wherein said contract provides for a discount to be applied as a result of said present purchase.
9. A method as set forth in claim 8, wherein said discount is applied to said present purchase.
10. A method as set forth in claim 8, wherein said discount is provided through a certificate specifying a future discount to be applied to a future purchase, said certification provided in association with said present purchase.
11. A method as set forth in claim 8, wherein said discount is provided through a certificate specifying a future discount to be applied to a future purchase of a specified product, said certification provided in association with said present purchase.
12. A method as set forth in claim 1, wherein said contract requires said total set of products to be purchased in a specified number of installments
13. A method as set forth in claim 1, wherein said total set of products specifies a variable quantity of promoted product to purchase.
14. A method as set forth in claim 1, further comprising the step of conditioning performance of a further obligation based upon said step of determining satisfaction.
15. A method as set forth in claim 14, wherein said further obligation comprises charging an additional cost to said customer if said contract is not satisfied.
16. A method as set forth in claim 14, wherein said further obligation comprises providing a benefit to said customer if said contract is satisfied.
17. A computer implemented method for offering and forming a multiple installment purchase contract for a promoted product, comprising the steps of:
  - estimating a customer's quantity requirement for said promoted product over a specified time span;
  - communicating a contract offer to said customer, wherein said contract offer contains one or more contractual terms including requiring the purchase of said quantity requirement within said specified time span and wherein said

step of communicating is performed through a first electronic communications interface;

and

allowing said customer to communicate an acceptance of said contract offer, wherein said acceptance is communicated through a second electronic communications interface.

18. A method as set forth in claim 17, wherein said first and said second electronic communications interface are the same interface.
19. A method as set forth in claim 17, wherein said one or more contractual terms depends upon said requirement.
20. A method as set forth in claim 17, wherein said first and second electronic communications interface are each one of an Internet world wide web interface, an electronic mail interface, and a kiosk.
21. A method as set forth in claim 17, wherein said one or more contractual terms comprise a total purchase quantity and a purchase price, and wherein said purchase price is chosen in dependence upon said total purchase quantity.
22. A method as set forth in claim 17, wherein said one or more contractual terms further comprise a purchase price which is chosen in dependence upon said specified time span.
23. A method as set forth in claim 17, said step of estimating comprising an automated calculation process which operates upon data supplied by said customer through a third electronic communications interface.
24. A method as set forth in claim 23, wherein said third electronic communications interface is common with either or both of said first or said second electronic communications interface.
25. A method as set forth in claim 17, wherein said step of estimating comprises:  
determining a customer's purchasing pattern of a base product set, said step of  
determining a customer's purchasing pattern comprising the step of  
monitoring and storing descriptions of purchases made by said customer of



items contained within said base product set during a plurality of purchase transactions;

and

calculating said requirement based upon usage patterns determined by analysis of said descriptions.

26. A method as set forth in claim 25, wherein at least some of said one or more contractual terms are chosen in dependence upon said purchase patterns.
27. A method as set forth in claim 25, wherein said one or more contractual terms comprises a purchase price which is chosen in dependence upon a brand purchasing behavior observed in said purchasing pattern.
28. A method as set forth in claim 25, wherein said promoted product and said base product are in a same product category.
29. A method as set forth in claim 25, wherein said promoted product and said base product are in related product categories.
30. A system for forming and monitoring performance of a multiple purchase installment contract, comprising:
  - an electronic communications interface for accepting a customer's assent to a contract to purchase a total set of products in multiple installments, wherein said total set comprises products from a specific sponsor;
  - means for recording into a purchase history database a plurality of purchase descriptions in association with an identification of said customer, wherein each purchase description contained within said plurality of purchase descriptions describes a purchase by said customer of an item contained within said total set of products;
  - and
  - means for analyzing said plurality of purchase descriptions to determine if said multiple purchase installment contract has been satisfied.
31. A system as set forth in claim 30, wherein said electronic communications interface is one of an Internet world wide web interface, an electronic mail interface, and a kiosk.

32. A system as set forth in claim 30, wherein said total set of products is specified by said customer.
33. A system as set forth in claim 30, wherein said total set of products is specified by said sponsor.
34. A system as set forth in claim 30, wherein said means for recording comprises equipment located at a retailer's point of sale location.
35. A system as set forth in claim 30, wherein said means for recording comprises equipment operated by an Internet retailer.
36. A system as set forth in claim 30, wherein said customer identification is determined by reading one of
  - a frequent shopper card,
  - a checking account number, and
  - a printed identification produced by a message transmitted over said electronic communications network.
37. A system as set forth in claim 30, wherein said contract provides for a discount to be applied as a result of said present purchase.
38. A system as set forth in claim 37, wherein said discount is applied to said present purchase.
39. A system as set forth in claim 37, wherein said discount is provided through a certificate specifying a future discount to be applied to a future purchase, said certification provided in association with said present purchase.
40. A system as set forth in claim 37, wherein said discount is provided through a certificate specifying a future discount to be applied to a future purchase of a specified product, said certification provided in association with said present purchase.
41. A system as set forth in claim 30, wherein said contract requires said total set of products to be purchased in a specified number of installments
42. A system as set forth in claim 30, wherein said total set of products specifies a variable quantity of promoted product to purchase.
43. A system as set forth in claim 30, further comprising a means for performing a further

obligation, said means for performing a further obligation operating in response to a determination made by said means for analyzing.

44. A system as set forth in claim 43, wherein said further obligation comprises charging an additional cost to said customer if said contract is not satisfied.
45. A system as set forth in claim 43, wherein said further obligation comprises providing a benefit to said customer if said contract is satisfied.
46. A system for offering and forming a multiple installment purchase contract for a promoted product, comprising:
  - means for estimating a customer's quantity requirement for said promoted product over a specified time span;
  - a first electronic communications interface for communicating a contract offer to said customer, wherein said contract offer contains one or more contractual terms including requiring the purchase of said quantity requirement within said specified time span and wherein said communications link comprises;
  - and
  - a second electronic communications interface for allowing said customer to communicate an acceptance of said contract offer.
47. A system as set forth in claim 46, wherein said first and said second electronic communications interface are the same interface.
48. A system as set forth in claim 46, wherein said one or more contractual terms depends upon said requirement.
49. A system as set forth in claim 46, wherein said first and second electronic communications interface are each one of an Internet world wide web interface, an electronic mail interface, and a kiosk.
50. A system as set forth in claim 46, wherein said one or more contractual terms comprise a total purchase quantity and a purchase price, and wherein said purchase price is chosen in dependence upon said total purchase quantity.
51. A system as set forth in claim 46, wherein said one or more contractual terms further

- comprise a purchase price which is chosen in dependence upon said specified time span.
52. A system as set forth in claim 46, said means for estimating comprising an automated calculation processor which operates upon data supplied by said customer through a third electronic communications interface.
53. A system as set forth in claim 52, wherein said third electronic communications interface is common with either or both of said first or said second electronic communications interface.
54. A system as set forth in claim 46, wherein said means for estimating comprises:  
means for determining a customer's purchasing pattern of a base product set,  
said means for determining a customer's purchasing pattern comprising  
means for monitoring and storing descriptions of purchases made by said customer of items contained within said base product set during a plurality of purchase transactions;  
and  
means for calculating said requirement based upon usage patterns determined by analysis of said descriptions.
55. A system as set forth in claim 54, wherein at least some of said one or more contractual terms are chosen in dependence upon said purchase patterns.
56. A system as set forth in claim 54, wherein said one or more contractual terms comprises a purchase price which is chosen in dependence upon a brand purchasing behavior observed in said purchasing pattern.
57. A system as set forth in claim 54, wherein said promoted product and said base product are in a same product category.
58. A system as set forth in claim 54, wherein said promoted product and said base product are in related product categories.
59. A computer program product comprising a computer storage medium having a computer program embedded in said computer storage medium for causing a computer to form and monitor performance of a multiple purchase installment contract over an

electronic communications interface, said computer program performing the steps of:

- accepting, through said electronic communications interface, a customer's assent to a contract to purchase a total set of products in multiple installments, wherein said total set of products comprises products from a specific sponsor;
- recording a plurality of purchase descriptions in association with an identification of said customer, wherein each purchase description contained within said plurality of purchase descriptions describes a purchase by said customer of an item contained within said total set of products;
- and
- analyzing said plurality of purchase descriptions to determine if said multiple purchase installment contract has been satisfied.

60. A computer program product comprising a computer storage medium having a computer program embedded in said computer storage medium for causing a computer to offer and form a multiple installment purchase contract for a promoted product, said computer program performing the steps of:
- estimating a customer's quantity requirement for said promoted product over a specified time span;
  - communicating a contract offer to said customer, wherein said contract offer contains one or more contractual terms including requiring the purchase of said quantity requirement within said specified time span and wherein said step of communicating is performed through a first electronic communications interface;
  - and
  - allowing said customer to communicate an acceptance of said contract offer, wherein said acceptance is communicated through a second electronic communications interface.

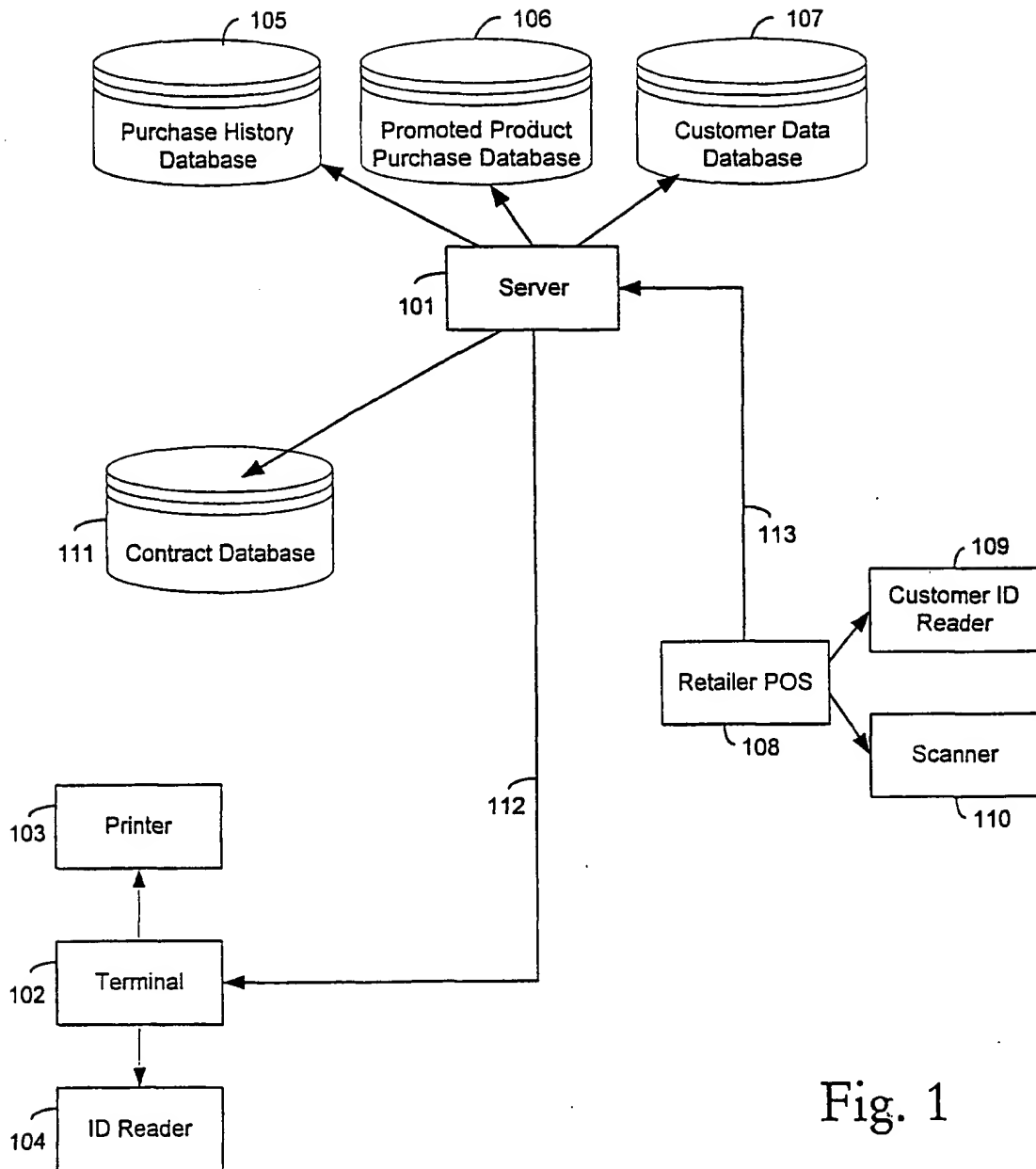
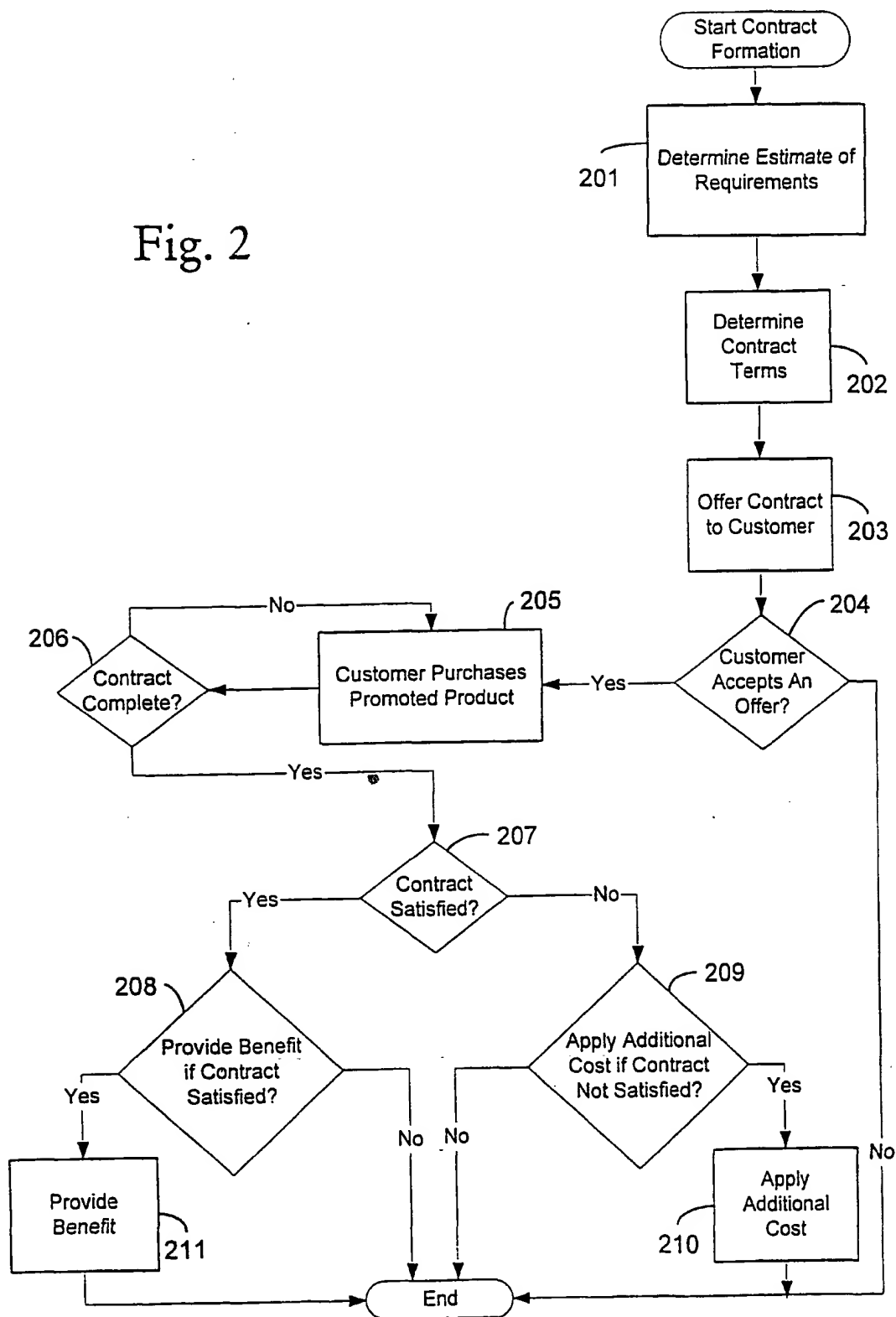


Fig. 1

Fig. 2



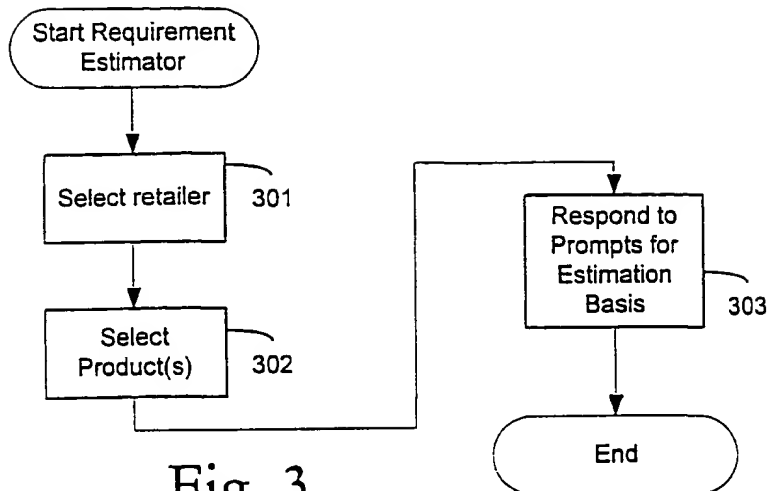
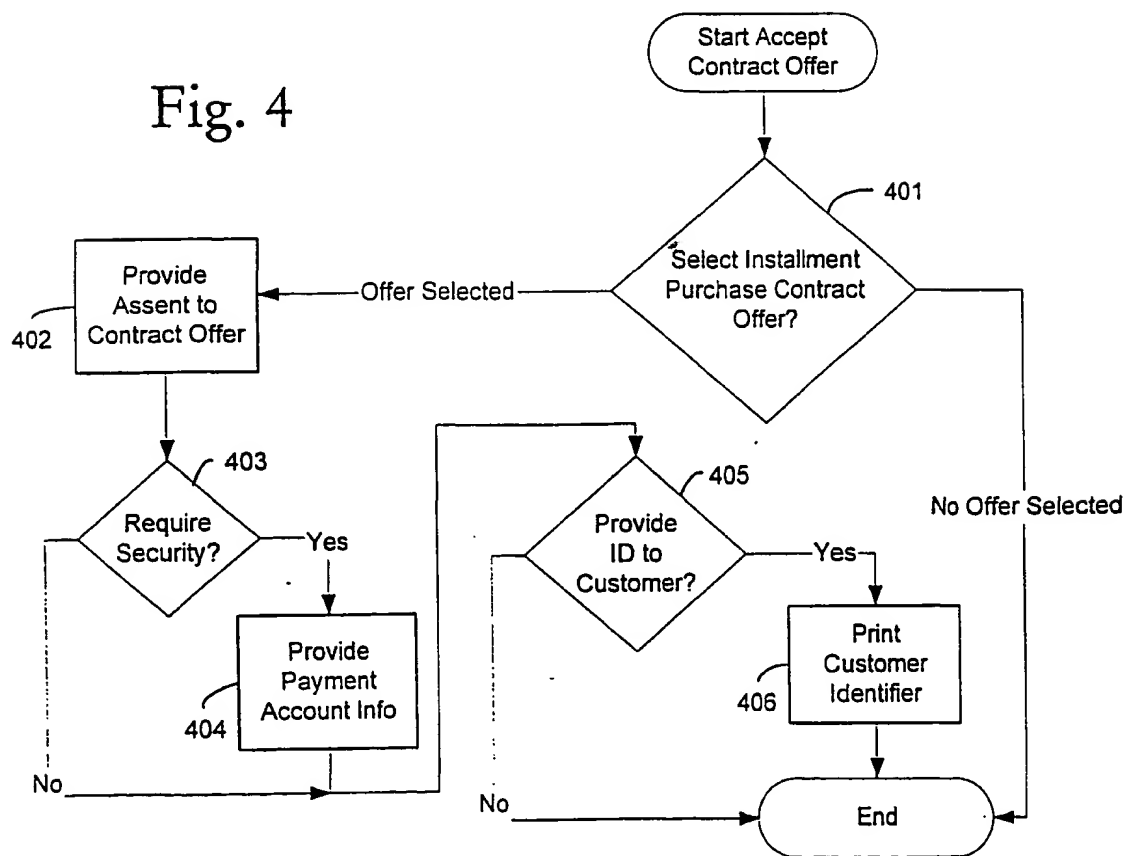


Fig. 4





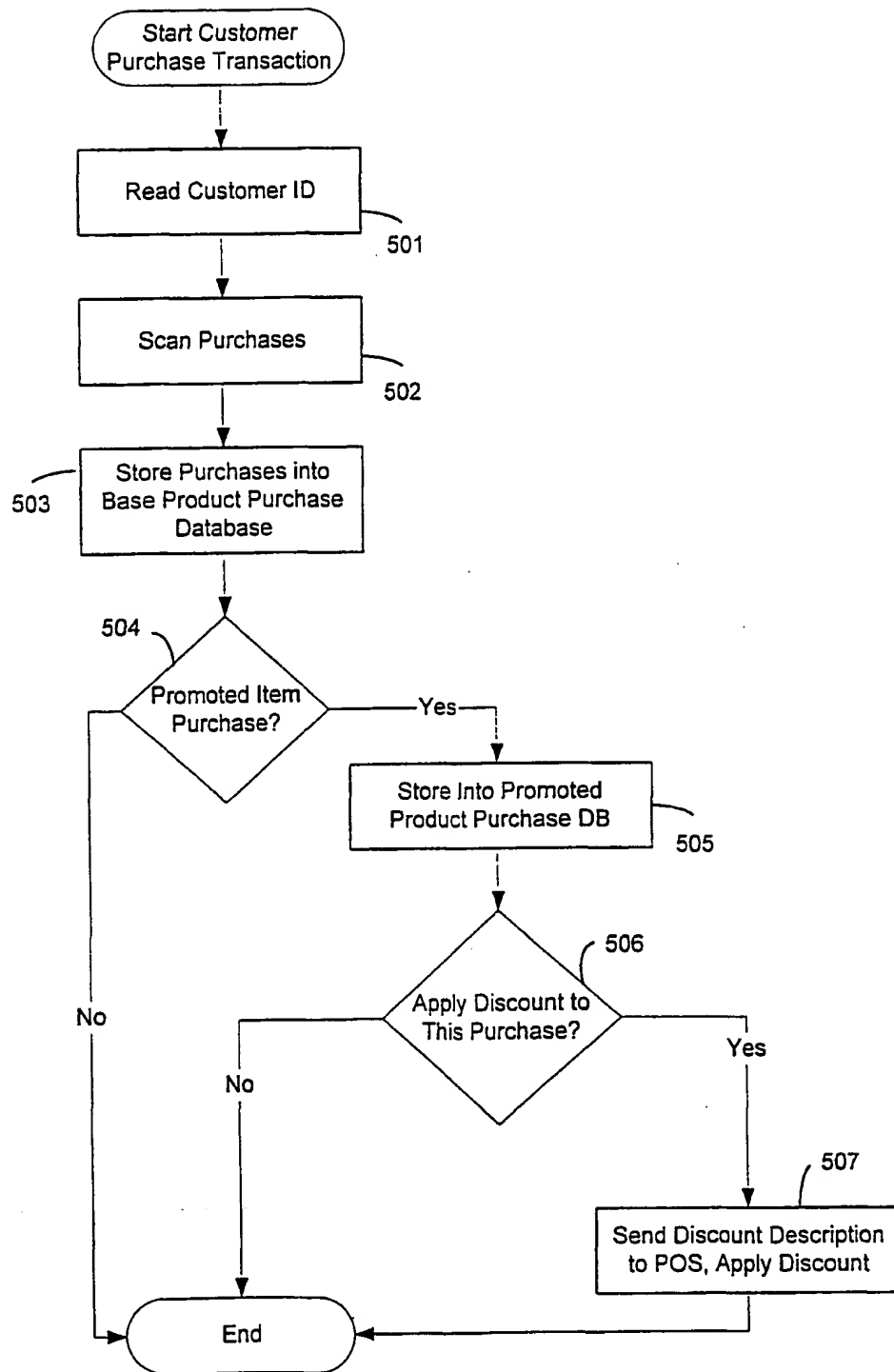


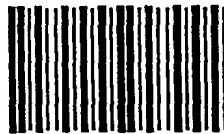
Fig. 5

You have Committed to Purchase 19 boxes of Brand X Detergent,  
42 oz Size, Before June 6, 2000

Because of your commitment, you receive a Discount of \$1.00 per box

As of March 6, 2000, You have Purchased 14 boxes

Present this certificate during your  
purchase in order to receive your  
discount and credit for that purchase



XXXXXX XXXXXXXX

Fig. 6